



# ecology and environment, inc.

160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811

International Specialists in the Environment

# 0253

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## MEMORANDUM

TO: Anita Parker, EPA Region IX

FROM: Jim James, Ecology and Environment, Inc. *[Signature]*

DATE: May 31, 1990

SUBJECT: Completed Work

cc: Marcia Brooks, E & E FIT

Attached is the following completed:

PA \_\_\_ PA Review \_\_\_ SSI \_\_\_ LSI \_\_\_ SIRE \_\_\_ X \_\_\_

Other \_\_\_\_\_

Site Name: Phoenix Well #71

EPA ID #: AZD980818827

City, County: Phoenix, Maricopa County

State Recommendation:  
(for Reviews only)

FOR EPA USE ONLY

CERCLIS Lead:

*FUND LEAD*

*EPA Recommendation = low priority LSI (ESI)*

*Anita Parker 9/13/90*

*New 9/17/90*

>/>/cwm

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### SCREENING SITE INSPECTION REASSESSMENT

SUBMITTED TO: Anita Parker, Site Assessment Manager, EPA Region IX  
PREPARED BY: Kenyon A. Larsen, Ecology and Environment, Inc. *KAL*  
THROUGH: Karen Ladd, Ecology and Environment, Inc. *KL*  
DATE: May 31, 1990  
SITE: Phoenix Well #71, prepared by Charles G. Graf, Arizona Department of Health Services, dated September 3, 1985  
TDD#: F9-8912-019  
EPA ID#: AZD980818827  
PROGRAM ACCOUNT#: FAZ0143SAA  
FIT REVIEW/CONCURRENCE: *James M. James 5/21/90*

cc: FIT Master File  
Dan Marsin, AZ Dept. of Environmental Quality

### INTRODUCTION

The U.S. Environmental Protection Agency, Region IX, has tasked Ecology and Environment, Inc.'s Field Investigation Team (FIT) to reassess all sites with completed Screening Site Inspections (SSI) in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database that are still being considered for further action. The strategy for determining whether these SSIs actually merit further action is based primarily on each site's potential to achieve a score high enough on the proposed revised Hazard Ranking System (rHRS) for inclusion on the National Priorities List (NPL). This strategy is intended to identify those sites posing the highest relative risk to human health or the environment. All other sites needing remedial or enforcement follow-up will be referred to the states or an appropriate federal authority. Actions and involvement by authorities other than the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) will also be considered.

kal/pw71/si-re

## SUMMARY

City of Phoenix Well #71 (PW #71) is located near the corner of Avalon Drive and 38th Drive in the west-central portion of Phoenix, Arizona (Township 2N, Range 2E, Section 27). PW #71 is one of several wells determined to be contaminated in a regional groundwater contamination plume. Three other City of Phoenix wells (Nos. 70, 151, and 152) in addition to several other irrigation and private wells have been found to be contaminated in the west-central Phoenix area. Contamination has been documented in wells as far west as Salt River Project (SRP) well number 7.5E-7.5N (near Osborn Rd. and 55th Ave.), north to the Lansdale well (near 35th St. and Osborn Rd.), east to SRP well 11.2E-7.7N (near Desert Valley Rd. and Highway 17), and south to PW #70 and #71. PW #71 is located almost adjacent to, although slightly north of, the City of Phoenix Well #70 (PW #70). The contamination plume is referred to by the Arizona Department of Environmental Quality (ADEQ) as the West-Central Phoenix Area plume (8).

In August 1982 a Salt River Project (SRP) preliminary report on groundwater quality presented sampling results that showed trichloroethylene (TCE) in PW #71 at up to 29 parts per billion (ppb), significantly above the federal Maximum Concentration Level (MCL) of 5 ppb. PW #70 had comparable levels of contamination. Both wells were removed from service in 1982 due to TCE contamination (1,9).

ADEQ completed a Site Inspection Report in 1985 that showed sampling results of PW #71 and other nearby wells. The sampling results showed TCE at 340 ppb, 15 ppb, and 4 ppb in the Lansdale well, PW #71 and Phoenix Well #152 respectively (8).

The typical geologic sequence in the area beneath PW #70 and #71 consists of the upper, coarse-textured alluvial deposits, a middle, fine-grained unit, and a lower, conglomerate unit (2). Based on well logs in the area of the site wells, the middle, fine-grained unit, consisting mostly of clayey materials, exists predominantly below a depth of approximately 500 feet below ground surface (bgs). PW #71 has a total depth of 701 feet bgs, and PW #70 has a total depth of 545 feet bgs. Both of these wells are screened in the upper, coarse-textured alluvial deposits (3,4).

The depth to groundwater in PW #71 is approximately 130 feet bgs. Groundwater generally flows from the north, northeast, and east to the west, and southwest (2). There are 14 City of Phoenix municipal wells within 3 miles of the site. Of these 14 wells, only Phoenix Wells #70, #71, #77, and #100 have been removed from service. The 14 municipal wells are City of Phoenix Well Nos. 68, 69, 70, 71, 72, 77, 87, 100, 151, 152, 154, 155, 156, and 157. The closest municipal well to PW #71 (besides PW #70, which is adjacent to PW #71) is Phoenix Well #68 which is located about 0.75 miles south of PW #71. Phoenix Wells #151 and #152 are approximately 1.0 mile northwest of PW #71. (1). Groundwater in the Phoenix area is mixed with surface water and blended in a common drinking water system to supply water to approximately 990,000 persons (5).

#### OTHER AUTHORITY INVOLVEMENT

The Phoenix Well #71 site (West-Central Phoenix Area) is currently listed on the Arizona Water Quality Assurance Revolving Fund (State Superfund). ADEQ most recently investigated the groundwater contamination in 1989. Soil gas sampling was conducted at 12 facilities suspected of contributing to the groundwater problem. This sampling effort was performed to determine if the 12 facilities were in fact contributing to the contamination plume. ADEQ identified the following three facilities during the soil gas sampling effort as being responsible, in part, for the groundwater contamination (6,7):

<u>Name</u>	<u>EPA ID#</u>
1. Lansdale Electronics	AZD081707762
2. May Industries	AZD035914084
3. Western Dynex	AZD058786724

The following nine sites were identified by the Arizona Department of Environmental Quality as sites that might be contributing to the contamination plume (7):

<u>Name</u>	<u>EPA ID#</u>
1. F & B Manufacturing Co.	AZD035900729
2. Georgia Pacific Corp.	AZD080664881
3. Hill Brothers Chemical	AZD008397242
4. Layke Inc.	AZD981630635
5. Paraflex Machine & Tools	AZD982007874
6. Precise Metal Products	AZD000026724
7. J. B. Rogers	AZD980882997
8. SRP-Western Garage	AZD981630106
9. Stevens Engineering, Inc.	AZD982008005

#### CONCLUSION

There are many potential sources of contamination for the Phoenix Well #71 contamination plume. The Arizona Department of Environmental Quality has identified at least three sites which are contributing to the groundwater contamination plume. Further investigation of this groundwater contamination problem should be conducted under each EPA ID# corresponding to the facilities which are suspected contributors.

*These sites are to be investigated  
in the FY89 Cooperative  
Agreement with ADEQ.*

*Wita Parker*

EPA RECOMMENDATION

	<u>Initial</u>	<u>Date</u>
No Further Remedial Action Planned (NFRAP)		
Low-priority LSI (lLSI)	<u>LSI</u>	<u>9/13/90</u>
Medium-priority LSI (mLSI)	<u>          </u>	<u>          </u>
High-priority LSI (hLSI)	<u>          </u>	<u>          </u>
Refer to Other Authority (R)	<u>          </u>	<u>          </u>

## REFERENCES

1. Ferrari, Nick, City of Phoenix Water Production Department, to Ronald L. Miller, Arizona Department of Health Services, letter re: Contamination in City of Phoenix Wells #70 and #71, August 3, 1982.
2. U.S. Department of the Interior Bureau of Reclamation Lower Colorado Region, Central Arizona Project Geology and Groundwater Resources Report, Maricopa and Pinal Counties, Arizona, Volume 1, December 1976.
3. Graf, Charles, Arizona Department of Health Services, to ERRIS Phoenix Well #71 File, inter-office memo re: The "Aquifer of Concern" in the Phoenix Well #71 area, July 10, 1985.
4. Ross, P.P., "Maps Showing Ground-Water Conditions in the Western Part of the Salt River Valley Area, Maricopa County, AZ, 1977," U.S.G.S. Water-Resources Investigations 78-40, Open File Report, March 1978.
5. Blanco, Franc, City of Phoenix Water Production Department, and Helena Brykarz, E & E FIT, telephone conversation, January 5, 1990.
6. Vargas, Anna, Arizona Department of Environmental Quality, and Kenyon A. Larsen, E & E FIT, telephone conversation, January 16, 1990.
7. Heywood, Judy, Arizona Department of Environmental Quality, and Kenyon A. Larsen, E & E FIT, telephone conversation, January 25, 1990 and accompanying facsimile sent to Kenyon A. Larsen, E & E FIT, January 25, 1990.
8. Graf, Charles G., "Phoenix Well #71 Site Inspection Report," Arizona Department of Health Services, Phoenix, Az., September 3, 1985.
9. Smith, Stephen A., "Water Quality in the Salt River Project: A Preliminary Report," Salt River Project, Water Resources Operations, Groundwater Planning Division, August 1982.

PA/SI CONTACT LOG

Facility Name: Phoenix Well #71  
Facility ID: AZD980818827

Name	Affiliation	Phone #	Date	Information
Chuck Graf	Arizona Department of Environ- mental Quality (ADEQ)	602-257-2104	1-16-90	See Contact Report.
Anna Vargas	ADEQ	602-257-2394	1-16-90	As of 1-15-90, three responsible parties have been identified. They are: 1) Lansdale Electronics; 2) Western Dynex; and 3) May Industries.
Judy Heywood	ADEQ	602-257-2124	1-25-90	Ms. Heywood said she would FAX me a list of the twelve facilities that were included in the most recent soil/gas study called the West-Central Phoenix Area. She will include the EPA ID numbers.

# CONTACT REPORT

<b>AGENCY/AFFILIATION:</b> Arizona Department of Environmental Quality		
<b>DEPARTMENT:</b> Hydrology		
<b>ADDRESS/CITY:</b> 2005 West Central Ave. /Phoenix		
<b>COUNTY/STATE/ZIP:</b> Maricopa/Arizona/85004		
<b>CONTACT(S)</b>	<b>TITLE</b>	<b>PHONE</b>
1. Chuck Graf	Mgr. Superfund Hydrology Unit	(602) 257-2104
2.		
<b>E &amp; E PERSON MAKING CONTACT:</b> Kenyon A. Larsen		<b>DATE:</b> 1-16-90
<b>SUBJECT:</b> Current status of Phoenix Well #71		
<b>SITE NAME:</b> Phoenix Well #71		<b>EPA ID#:</b> AZD980818827

ADEQ, and now probably EPA, refer to the site as West-Central Phoenix Area (called Phoenix Well #71 in this contact report).

Anna Vargas is the project manager at that site. Her number is (602) 257-2394.

Mr. Graf will send me a copy of the SI he conducted on the Phoenix Well #71 plume. The Phoenix Well #71 site is currently on the Arizona State Superfund List. The site is further along than other contamination plume sites in the Phoenix area. The list of Potentially Responsible Parties was divided into four categories based on the likelihood of contamination contribution.

Twelve (12) sites were chosen to conduct soil gas analyses under U.S. EPA Superfund (CERCLA) Supervision.

Two (2) Responsible Parties were identified by this Site Investigation. Four other "Interested Parties" were also notified of their possible contribution to the contamination plume.

Remediation will be started by the R.P.s under a steering committee of other facilities in the area.

A copy of the soil gas SI report was sent to Anita Parker of the U.S. EPA.

kal/pw71/clcr